

The damage to a person hit by a hazardous fragment depends upon the shape of the fragment, the angle of impact, and whether it strikes a vital organ or not. The 58 ft-lbs is considered by DOD to be an acceptable risk. The number is a result of injury statistics gathered from WWI, WWII, and the Korean War. This is also the NATO definition of hazardous fragment.

A hazardous fragment becomes a non-hazardous fragment when the energy is less than 58 ft-lbs, which is a function of mass and velocity. Distance does not enter into the equation. See response to question 12(4).

18. What is the likely or potential property damage that could occur from frag within the identified MSD and up to the maximum fragment flight distance?

Response: There will probably be property damage, but how much damage is dependent on the size of the detonation, size of fragments, orientation of the round, depth below the surface, and other factors.

19. What is the likelihood that an uncontrolled detonation will occur?

Response: Based on professional judgment, it is very unlikely that a unintentional detonation will occur, otherwise the USACE wouldn't have proposed to reduced the MSD to 1/600.